

Docket No: 966927.00005 (0273-0005)
Appl. No: 10/026,911

In the Claims:

Please amend claim 1, cancel claim 6 and insert new claims 34 – 38 as shown in the following listing of the entire claims in the Application.

1. (currently amended) A pharmaceutical composition ~~containing~~ comprising a pharmaceutically acceptable carrier or diluent and a peptide for use as immunotherapeutic agent capable of inducing IgG antibodies response to allergenic proteins without inducing IgE-mediated allergic reaction ~~wherein all amino acids of the peptide except one are identical to the amino acids of an amino acid sequence which is part of an allergenic protein amino acid sequence and the allergenic protein is the birch pollen allergen Bet v 1 and a pharmaceutically acceptable carrier or diluent, wherein the peptide:~~

- a) has an amino acid sequence obtained from the birch pollen allergen Bet v 1;
- b) has a length of at least 8 ~~[[to]]~~ and no more than 50 amino acids;
- c) has at least three ~~preferably~~ consecutive amino acids identical to at least three solvent-exposed amino acids of an allergenic protein which appear in close vicinity on the molecular surface of the allergenic protein;
- d) is upon administration capable of inducing IgG antibodies to the allergenic protein and
- e) does not induce an IgE-mediated allergic reaction. and
- ~~e) — the peptide leads upon administration to the production of protective IgG antibodies which react with the protein from which the peptide is derived~~

2. (previously presented) A pharmaceutical composition according to claim 1, wherein said at least three solvent-exposed amino acids appear on the molecular surface of the allergenic protein within a surface patch of approximately 500 square Angström.

3. (previously presented) A pharmaceutical composition according to claim 1, wherein at least five consecutive amino acids of the peptide are identical to at least five consecutive solvent-exposed amino acids of the allergenic protein.

4. (previously presented) A pharmaceutical composition according to claim 1, further containing an adjuvant.

5. (canceled)

6. (canceled)

7. (canceled)

8. (canceled)

9. (previously presented) A pharmaceutical composition according to claim 1, wherein the peptide amino acid sequence comprises at least the N-terminal or C-terminal five amino acids of the allergenic protein amino acid sequence.

10 – 13. (canceled).

14. (withdrawn) A method for preparing a pharmaceutical composition comprising:

- a) determining which amino acids of a given allergenic protein are solvent-exposed on the surface of the allergenic protein;
- b) preparing a peptide having a length of 8 to 50 amino acids, wherein at least three preferably consecutive amino acids of the peptide are identical to at least three solvent-exposed amino acids of the allergenic protein which appear in close vicinity on the molecular surface of the allergenic protein; and
- c) optionally admixing the peptide with a pharmaceutically acceptable carrier or diluent.

15. (withdrawn) A method according to claim 14, wherein said at least three solvent-exposed amino acids appear on the molecular surface of the allergenic protein within a surface patch of approximately 500 square Angström.

16. (withdrawn) A method according to claim 14, wherein at least

five consecutive amino acids of the peptide are identical to at least five consecutive solvent-exposed amino acids of the allergenic protein.

17. (withdrawn) A method according to claim 14, further comprising adding an adjuvant.

18. (withdrawn) A method according to claim 14, wherein all amino acids of the peptide except one are identical to the amino acids of an amino acid sequence which is part of the allergenic protein amino acid sequence.

19. (withdrawn) A method according to claim 18, wherein the one amino acid which deviates from the amino acid sequence of the allergenic protein is the N-terminal or C-terminal amino acid of the peptide amino acid sequence.

20. (withdrawn) A method according to claim 14, wherein the amino acid sequence of the peptide is identical to an amino acid sequence which is part of the allergenic protein amino acid sequence.

21. (withdrawn) A method according to claim 14, wherein the allergenic protein is the birch pollen allergen Bet v 1.

22. (withdrawn) A method according to claim 14, wherein the peptide amino acid sequence comprises at least the N-terminal or C-terminal five amino acids of the allergenic protein amino acid sequence.

23. (withdrawn) A method according to claim 14, wherein the solvent-exposed amino acids of the allergenic protein are determined by determining the hydrophilicity profile of the allergenic protein.

24. (withdrawn) A method according to claim 14, wherein the solvent-exposed amino acids of the allergenic protein are determined from the three-dimensional structure of the allergenic protein.

25 – 27 (canceled).

28. (withdrawn) A method for treating an allergic disease, comprising: administering to a patient in need thereof the pharmaceutical composition of claim 1.

29. (withdrawn) A method according to claim 28, wherein the at least three solvent-exposed amino acids appear on the molecular surface of the allergenic protein within a surface patch of approximately 500 square Angström.

30. (withdrawn) A method according to claim 28, wherein at least five consecutive amino acids of the peptide are identical to at least five consecutive solvent-exposed amino acids of the allergenic protein.

31. (withdrawn) A method according to claim 28, wherein the peptide, upon administration, is capable of inducing IgG antibodies which react with the allergenic protein.

32. (withdrawn) A method according to claim 31, wherein the induced IgG antibodies can reduce or prevent binding of IgE antibodies to the allergenic protein.

33. (withdrawn) A method according to claim 28, wherein the peptide, upon administration, does not induce a significant IgE response.

34. (new) The pharmaceutical composition according to claim 1, wherein the amino acid sequence of the peptide is identical to an amino acid sequence which is part of the allergenic protein amino acid sequence.

35. (new) The pharmaceutical composition according to claim 1, wherein all amino acids of the peptide except one are identical to the amino acids of an amino acid sequence which is part of the allergenic protein amino acid sequence.

36. (new) The pharmaceutical composition according to claim 35, wherein the one amino acid which deviates from the amino acid sequence of the allergenic protein is the N-terminal or C-terminal amino acid of the peptide amino acid sequence, wherein said amino acid is a cysteinyl residue.

37. (new). The pharmaceutical composition according to claim 1, wherein the at least three amino acids identical to the at least three solvent-exposed amino acids of an allergenic protein are not consecutive.

38. (new). The pharmaceutical composition according to claim 1, wherein the peptide is any one of Seq. ID. Nos. 1 to 6.